own activities contributed not a little to the high estimation in which the observatory was held. Foremost, perhaps, should be placed his monograph on the nebula of Orion, a useful and painstaking piece of work. Of more originality were his studies of the physical constitution of the sun and its surroundings, the outcome of several eclipse expeditions, some earlier than the appointment to the Lick Observatory. Planetary markings and close examination of the surfaces of such minute discs as those of Jupiter's satellites or the planet Uranus also engaged his attention. The helical forms of nebulæ were the subject of intimate study, and in other directions Prof. Holden displayed equal energy and ability.

Considering the difficulty of getting a new observatory into efficient working order, increased as these difficulties were by the inaccessibility of the situation, it will be admitted that the twelve years' direction from 1885 to 1897 accomplished much useful work. In the latter year Prof. Holden resigned the position of director of the Lick Observatory, and his scientific activities apparently ceased. W. E. P.

NOTES.

The Bakerian Lecture of the Royal Society will be delivered by Prof. A. Fowler on Thursday next, April 2, upon the subject of "Series Lines in Spark Spectra."

We announce with regret the death on March 23, at sixty-eight years of age, of Prof. G. M. Minchin, F.R.S., formerly professor of mathematics, Royal Indian Engineering College, Coopers Hill.

We regret to see the announcement of the death on February 17, at sixty-two years of age, of Dr. G. J. Burch, F.R.S., formerly professor of physics at University College, Reading, and the author of a number of papers upon electrical subjects and physiological optics.

The eighth annual meeting of the British Science Guild will be held at the Mansion House on Friday, May 22, at 4 o'clock p.m., when the Lord Mayor, the Right Hon. Sir T. Vansittart Bowater, Kt., will preside. The annual dinner will be held at the Trocadero Restaurant on the same date, at 7.30 p.m., under the chairmanship of the president of the guild, the Right Hon. Sir William Mather, P.C.

The enormous drain on the mammalian life of the world caused by the fur-trade is strongly emphasised in the following extract from an article in the *Times* of March 19 on the London spring fur-sales:—"Yesterday there were sold in the morning 183,754 skunk skins; in the afternoon 136,623 American opossum and 80,242 raccoons, as well as 3,602 civet cats. To-day will be offered 430,401 skunks, and to-morrow 2,500,000 musquash of various classes. In all there will be sold more than 4½ millions of musquash skins; and it is no wonder that the once familiar musk-rat 'houses,' which used to dot every lake and pond all over the United States, looking like great mole-hills sticking up from among the rushes, are growing scarce." During the three weeks of the sale it is probable that 10 or 12 million skins will have been sold.

The discovery of ancient human remains in German East Africa by Dr. Hans Reck, of the Geological Institute of Berlin University, may prove to be an event of some importance to anthropologists. The report of the discovery, published in the *Times* of March 19, leaves us in some doubt as to the antiquity and racial characters to be assigned to these East African human remains, but apparently they are of mid-Pleistocene date, and show the distinctive features of the negro. If such prove to be the case, we must conclude that the negro race was already evolved in Africa at an earlier date than is now generally supposed. The *Times* report also informs us that the man thus discovered had thirty-six teeth—four more than is given to human and anthropoid races. The teeth are also said to show marks of filing; it would indeed be a remarkable fact if the habit of filing the teeth, so common in modern African races, should have been in use at the early date assigned to these prehistoric remains.

The International Phytopathological Conference summoned by the French Government in conjunction with the Italian Government to meet at the International Institute of Agriculture was inaugurated by his Majesty the King of Italy on February 24, and was brought to a conclusion on March 5, in the presence of all the fifty delegates, who represented the thirty-five States which took part in the conference. By the proposed International Convention adhering States pledge themselves in the first place to take whatever legislative and administrative measures are necessary to prevent the distribution of all diseases of plants in their own countries, but specially to organise an effective service of supervision over nurseries, gardens, glasshouses, and other establishments which carry on a trade in living plants. The measures which adhering States would pledge themselves to take include (*a*) the erection of one or more institutes for scientific studies and research; (*b*) the organisation of an effective service of supervision over nurseries, including the packing and dispatch of plants; (*c*) the issue of phytopathological certificates. They would bind themselves only to admit plants accompanied by phytopathological certificates issued by or from a competent official authority, except in the case of plants which are imported for scientific research at an institute authorised by the Government.

March bids fair this year to establish a record for rainfall, and at Greenwich, where the aggregate rainfall to the morning, March 23, was 3·54 in, the total for the whole month has only been greater in two years during the last century, from 1815. The heaviest record fall is 4·05 in. in 1851, and in 1905 the measurement was 3·57 in.; the latter was exceeded by rain during the day, March 23, and there are nine days which seem likely to be wet, to secure a total of 0·52 in., which will render the present month the wettest March on record for the last one hundred years. At Greenwich there have in all only been eight years with the March rainfall more than 3 in. since 1815. Rain has fallen every day in the month to March 23, with the exception of March 1 and 2, and on March 8 and 9 the aggregate rainfall was 1·43 in., whilst the average for the whole month is 1·46 in. At Camden Square the total rain for the month to March 23 is 4·12 in., which is 0·43 in. more than in any previous March during the last fifty-five years. On March 22 the shade temperature at Greenwich was 29°, which is as cold as any previous reading since January 25, and the terrestrial radiation temperature on March 22 was 18°, which is lower than any grass temperature since January 24. The Greenwich records for the sixty years 1850–1909 show that frost has occurred in thirty-one years on March 22, so that the chances are in favour of frost on that day, whilst on March 20 frost has only occurred in twelve years, which gives the chance of 5 to 1 against frost.

A COMPLIMENTARY banquet was given by members of the medical profession to Surgeon-General Gorgas, sanitary officer of the Panama Canal Commission, on Monday, March 23. Sir Thomas Barlow (president of the Royal College of Physicians) occupied the chair, and the company included many distinguished representatives of medical science. Earlier in the day Surgeon-General Gorgas delivered a lecture before the Royal Society of Medicine on his sanitary work in Panama. In the course of his lecture he said that one-third of the canal zone is low and marshy, and had the reputation for four hundred years of being one of the most unhealthy regions in the world. It is probable that more white men have died there from tropical diseases than at any other place within the tropics. The French began work on the canal in 1880, the Americans in 1904. During the intervening twenty-four years it had been discovered that malaria and yellow fever are transmitted from one human being to another by the mosquito—malaria by the anopheles, and yellow fever by the stegomyia. These discoveries enabled health conditions at Panama to be controlled. Had the Americans known no more about these two diseases in 1904 than did the French in 1880, he did not believe that they could have done any better.—The degree of Doctor of Science, *honoris causâ,* was conferred upon Surgeon-General Gorgas at a special Convocation of the University of Oxford on Tuesday, March 24.

ON Wednesday, March 18, a portrait of Sir William Ramsay, painted by Mr. Mark Milbanke, was presented to the University of London, University College, on behalf of a committee of subscribers, consisting mainly of former colleagues and past students, by Prof. J. Norman Collie. Prof. Collie directed attention to the scientific achievements of Sir William Ramsay. While an assistant in Glasgow, Sir William Ramsay, together with Prof. Dobbie, discovered the fact that a certain number of acids obtained by oxidation of compounds obtained from bone oil and coal tar were identical with the products obtained by oxidation of the alkaloids. After that, when he was professor at University College, Bristol, he brought out a very large amount of extremely interesting work in physical chemistry. On coming to London and University College, his first great discovery, made in conjunction with Lord Rayleigh, was that of argon; and this was followed soon afterwards by the isolation of helium from clevite. Following up these two discoveries, Sir William Ramsay, after five years' hard work with Prof. Travers, succeeded in finally obtaining from the atmosphere three more elements —neon, krypton, and xenon. After this, Sir William Ramsay investigated the emanation that comes off from the element radium. This he obtained in the pure condition above mercury, and noticed that it gradually decomposed and that helium resulted. The portrait was accepted by the Vice-Chancellor of the University (Dr. W. P. Herringham) and by the chairman of the managing subcommittee of University College (Dr. J. Bourne Benson). A replica of the portrait was presented to Lady Ramsay, on behalf of the subscribers, by the Provost of the college in token of the esteem and affection in which Sir William and Lady Ramsay are held at University College. The gift was briefly acknowledged by Lady Ramsay and Sir William Ramsay.

IN the *Times* of March 17 E. Naville gives a further account of his remarkable discoveries at Abydos. He has found a great rectangular reservoir, which is shown to belong to the period of the temple of the Sphinx, when building with enormous stones without ornament came into fashion. This he believes to be the oldest stone monument, in the architectural sense, in Egypt. Some of the pyramids may be older, but, except for the inner chambers, they are without architectural plan. This reservoir was used for the storage of water in high Nile; and it is a remarkable fact that the beginning in architecture is neither a temple nor a tomb, but a gigantic water-work, showing that even in this early period the people had carefully observed the laws of the rise and fall of the Nile, and of the processes of infiltration.

IN the *National Geographic Magazine* for February Mr. W. J. Showalter contributes an interesting article, illustrated by a fine series of photographs, showing how the opening of the Panama Canal has been delayed by the earth slides, particularly in what is known as the Culebra Cut. It was only with the deepening of the canal bed in 1910 that these obstacles became really formidable; in all some thirty million cubic yards of material have been removed. Mr. Showalter describes the geological conditions of the area, with eleven groups of bedded rock and six of igneous formations, the result of volcanic action and uplifting of marine strata. The engineers now intend to check erosion in the Culebra Cut by covering the banks with vegetation, and the ships of the future will pass between banks of tropic green, except at those places where the living rock defies the efforts of the forester.

IN his presidential address to the Society for Psychical Research (published in the current number of the society's Proceedings), Prof. Henri Bergson asked "what would have happened if modern science, instead of setting out from mathematics to turn its attention towards mechanics, physics, and chemistry, instead of bringing all its forces to converge on the study of matter, had begun by the consideration of mind—if Kepler, Galileo, and Newton, for example, had been psychologists." He answered that our psychology would have been almost inconceivably different from what it is. "Foreign to every mechanistic idea, not even conceiving the possibility of such an explanation, science would have inquired into, instead of dismissing *a priori,* facts such as those you study. Vitalism," he continued, "is a sterile doctrine to-day. It will perhaps not be so always, and it probably would not have been so had modern science at its origin taken things at the other end."

THE current number (February, 1914) of the *Journal of Genetics* contains papers dealing with several aspects of the problem of heredity. Mr. R. K. Nabours writes on inheritance in Paratettix, an American genus of locusts. In addition to *P. texanus,* Hanc., he found eight varieties which differ in their colour patterns, and are given new specific names. The inheritance of these colour patterns in crosses is found to be Mendelian in the sense that segregation occurs in the F_2 offspring, the species *P. texanus* being recessive to all the others. In the F_1 the colour patterns of both parents are equally developed, so that there is no phenomenon of dominance. In the experiments, five "unexpected individuals" appeared, which seem to have been due to germinal changes. Long and short wings were found not to be inherited, but to be controlled by environment. Mr. Richardson contributes a note on inheritance in strawberries, and Mr. Salmon describes sterile male dwarfs in the hop. In continuing his studies on the effects of environment on parthenogenetic and sexual reproduction in Cladocera, Mr. Agar concludes that "there is no justification for retaining the hypothesis of an inherent reproductive cycle," the transition from one type of reproduction to the other being entirely under environmental control. Dr. C. J. Bond describes an hermaphrodite Formosan pheasant having the secondary sexual characters of a male on the left side and of a female on the right, and suggests an explanation based on hormones. The utility of the paper on reduplication series, which deals with highly questionable Mendelian hypotheses, is problematical.

THE revived interest in the study of Thysanoptera among English entomologists is shown by the publication of two important papers in a recent number of the *Journal of Economic Biology* (vol. viii., No. 4) on British species of the order, by Mr. C. B. Williams and Mr. R. S. Bagnall respectively. A number of new species are described in each paper. Mr. Williams also describes some new forms from the West Indies.

THE lately issued part of the *Bulletin of Entomological Research* (vol. iv., part 3, 1913) is mostly occupied by two papers combining geographical and economic interest. Dr. J. J. Simpson describes his journeys for entomological research in British West Africa, giving much ecological information and a map to show the ascertained range of five species of Glossina in Sierra Leone. Mr. A. D. Peacock discusses the "Entomological Pests and Problems of Southern Nigeria," describing the principal insects that injure the staple crops of the country—cotton, cocoa, maize, yams, and rubber. The stages of the red "cotton stainer"—a heteropterid bug, *Dysdercus superstitiosus,* are described and illustrated with coloured figures; excellent illustrations of other harmful species are also given.

IN the February number of *Naturen* Dr. A. W. Brøgger discusses certain "kayaks" discovered in Scotland and the isles—two of them so long ago as the seventeenth century—which have been regarded as of a Scandinavian, or rather Finnish, type. Dr. Brøgger states, however, that this is altogether wrong, and that the kayaks, together with the associated paddles and other implements, closely resemble those used at the present day in Greenland. How they reached Scotland and the Orkneys is briefly discussed.

THE greater portion of the third part of vol. iv. of the Annals of the Transvaal Museum is occupied by papers on the results of the zoological section of the Percy Sladen Memorial Expedition to Great Namaqualand in 1912–13, of which section Mr. Paul Methuen was in charge. Mr. Austin Robert supplies the list of mammals collected, while the reptiles and amphibians are discussed by Messrs. Methuen and John Hewitt, and the arachnids by Mr. Hewitt. New species in each of the three last-mentioned groups are described.

As the result of a fifteen weeks' sojourn in South Georgia during the Antarctic summer of 1912–13, Mr. Cushman Murphy (Bull. Amer. Mus. Nat. Hist., vol. xxxiii., p. 63) was led to believe that old males of the sea-elephant had become exceedingly scarce, and that not sufficient were left to impregnate the females. According, however, to the taxidermist who accompanied Major Barrett-Hamilton, this was a temporary deficiency due partly to the visits of a sealing vessel belonging to the Compaña Argentina de Pesca, and partly to an unprecedented slaughter of some 600 males in a single season. During the past season fair-sized and large males are reported to have been relatively numerous.

WE have received from the secretary of the Commission on Zoological Nomenclature, in conformity with the instructions of the congress which require that a year's notice be given before any official exceptions to its rules can be allowed, a memorandum praying for the retention of the old generic names Doliolum, Pyrosoma, Salpa, Cyclosalpa, Appendicularia, and Fritillaria, signed by the following workers on Tunicata :—C. Apstein, A. Borgert, G. P. Farran, G. H. Fowler, R. Hartmeyer, W. A. Herdman, J. E. W. Ihle, H. Lohmann, W. Michaelsen, G. Neumann, C. Ph. Sluiter, F. Todaro. How far the present confusion would be worse confounded by conformity to the new rules may be seen by the fact that what every zoologist knows as Pyrosoma would be called Doliolum, and a new name would have to be coined for the well-known plankton key-form at present termed Doliolum.

In the *Izvestiya* of the Imperial Academy of Sciences of St. Petersburg (February, 1914) Madame H. I. Poplavska publishes some preliminary results of her botanical researches in the neighbourhood of Lake Baikal. The fauna of the lake exhibits such peculiarities that Prof. Berg has defined it as a subregion of the holarctic region, but the flora has hitherto aroused little interest. The lake affects the distribution of rainfall and the temperature, the summers being much colder in the neighbourhood of the lake than in the surrounding parts of Siberia. Consequently the climate is similar to that of alpine regions and lofty peaks, and the flora is adapted to such conditions. Madame Poplavska mentions several forms peculiar to the Baikal area, some of which differ in so many points from their allied forms in other regions that they may be considered independent species, while others, not having as yet fully adapted themselves to local conditions, show few divergences, and can only be styled varieties. The habitat of these forms and their relation to allied species do not support the view that they are a relict flora.

Count de Montessus de Ballore examines the so-called luminous phenomena of earthquakes in a paper published in the latest bulletin of the Seismological Society of America (vol. iii., pp. 187–90). Referring to Galli's catalogue of 148 earthquakes during which luminous phenomena were reported, he shows that the time-intervals between these phenomena and the earthquakes are very variable and sometimes considerable, the accounts come indifferently from the epicentral areas and from distant regions, and the lights appear more frequently from the atmosphere than from the ground. In the great catalogues of Chinese earthquakes, luminous phenomena are never described as attending earthquakes. Two cases are examined in detail. The lights seen during the Valparaiso earthquake of 1906 were probably due to a thunderstorm, and those during the earthquake of November 16–17, 1911, in Germany and Switzerland to meteors. The author concludes that, in the present stage of our knowledge, the existence of luminous earthquake phenomena should be neither affirmed nor denied, but that all the facts at our disposal tend to a negative conclusion.

The current number of *Symons's Meteorological Magazine* contains an interesting account by Mr. A. H. Hignett of the peculiar behaviour of a cyclonic whirl or tornado which did an immense amount of damage in Cheshire on the evening of October 27 last. It lasted only a few minutes, and its track was about 150 yards wide. It was accompanied by vivid lightning, heavy rain, and a loud noise, said to resemble that of "hundreds of motor-cars crashing through the trees." On entering the county of Cheshire from the north of Shropshire and travelling in a northerly direction, it seems to have risen in the air and passed over about seven miles of country without doing any damage, and then to have descended and struck a tree standing alone in a field smashing it to pieces. It then apparently rose again for about $1\frac{1}{4}$ miles, and afterwards descended and travelled along the foot of the Peckforton Hills (600–700 ft. above sea-level), destroying trees and buildings in its track, and eventually passed into Lancashire near Runcorn. The wind is described as warm, but in South Wales, where the cyclone occurred earlier in the day, it was said to be icy cold. This bounding motion of the whirl is probably by no means an isolated case, and seems to point to another danger to which aviators may be exposed.

Dr. P. W. Bridgman, of the Jefferson Physical Laboratory, Harvard University, whose high-pressure research is well known to our readers, has communicated to the American Academy a paper on the technique of high-pressure experimenting which will be of great service to all who wish to follow him in dealing with physical measurement under pressures of ten to thirty thousand kilograms per square centimetre. He gives details of his methods of packing, the construction of his pistons and cylinders, and the connection of his pipes, valves, and pressure gauges. The paper appeared in the February number of the Proceedings of the American Academy.

No. 209 of the Scientific Papers of the Bureau of Standards deals with the recent determinations of the latent heat of fusion of ice by Messrs. Dickinson, Harper, and Osborne, of the bureau. The natural or artificial ice was cooled in a cryostat to either $-0{\cdot}7^\circ$ C. or $-3{\cdot}78^\circ$ C. before insertion in the calorimeter. Its weight was determined while suspended in the cryostat. Both the electrical method and the method of mixtures were used in measuring the heat of fusion. The former method allows the temperature of the calorimeter to be kept nearly constant during the melting of the ice, and the cooling correction is therefore small. Ninety-two samples of ice were tested, commercial can, plate, and natural ice, and ice made in the laboratory from air-free distilled water were used, and the heat of fusion found to be the same for each to within one part in 1000. The final result is 79·63 calories per gram.

In the third of his six lectures on new problems of theoretical physics, recently published (in German) by the Ernest Kempton Adams Fund of Columbia University, Prof. W. Wien discusses in an illuminating manner the various electronic theories of the conduction of heat and electricity through metals. The practically infinite conductivity at the absolute zero, rendered probable by the researches of Kamerlingh Onnes, is explained if we assume that the distribution of molecules at the lowest temperatures is perfectly regular, so that the displacement of electrons along certain lines encounters no resistance. The irregularity of distribution induced by rise of temperature and consequent thermal agitation reduces the free path of the electrons, and hence also the conductivity. There is some evidence to show that it is only the mean free path, and not the number of electrons or their mean velocity, which is affected by temperature. Indeed, the lecturer inclined to the belief that even at the absolute zero all electrons have an irreducible kinetic energy, such as is required by the persistence of both diamagnetism and photo-electric effects at the lowest temperatures, not to speak of the expulsion of electrons by radio-active substances in entire independence of the temperature. The question as to whether canal-ray ions emit light in the charged or the uncharged condition is discussed in the sixth lecture. Bärwald showed in 1911 that a magnetic field stops but a small portion of the light emission, whereas most of the positive ions are deflected. This tells in favour of the view that the luminous bodies are uncharged. Even Reichenheim's observation that the whole of the luminous emission from an alkaline-earth anode may be deflected does not invalidate this view, since in this case the mean free path was very small, and every atom was probably charged at least once in the course of its passage.

The increasing adaptation of enzymes to chemical purposes is well illustrated by the utilisation of urease, by Dr. R. H. Aders Plimmer and Miss R. F. Skelton (*Biochemical Journal,* vol. viii., p. 70), in the rapid estimation of urea in urine. The action of the urease of the soy bean has quite recently been shown to be entirely specific; in the communication cited details are given of a process by means of which a rapid and accurate method of estimation is afforded of a substance the analytical determination of which has always presented some difficulty and uncertainty.

During the past few years several active principles have been isolated from ergot which account for most of its peculiar physiological properties; certain other effects have, however, been observed which have not been satisfactorily explained hitherto. In the current number of the *Biochemical Journal* (vol. viii., No. 1) Mr. Arthur J. Ewins describes the isolation from ergot of traces of acetylcholine, a base which produces a peculiar inhibitor effect on the heart, suggesting that caused by muscarine, which had been frequently observed to characterise the use of ergot. That this base is responsible for the effect was shown not merely by its actual isolation from ergot, but by the fact that the synthetic base, prepared from choline, has an identical physiological action.

The following books relating to science are announced by Gebrüder Borntraeger, of Berlin:—"Die wichtigsten Lagerstätten der 'Nicht-Erze,'" Prof. O. Stutzer, Teil. ii., Kohle, Allgemeine Kohlengeologie, illustrated; "Ueber die Bedingungen der Gebirgsbildung," Dr. K. Andrée, illustrated; "Beiträge zur chemischen Petrographie," Prof. A. Osann, Dritter Teil; "Geologischer Führer durch Nordwest-Sachsen," Dr. E. Krenkel, illustrated; "Praktikum der chemischen, biologischen und bakteriologischen Wasseruntersuchung," Prof. O. Emmerling, illustrated; "Geologische Charakterbilder," edited by Prof. H. Stille, illustrated, Heft 18, 19, 20.

The following new books are announced by C. Griffin and Co., Ltd.—In *Biology*.—Practical Field Botany, A. R. Horwood, illustrated; in *Chemistry*—A Text-Book of Inorganic Chemistry, edited by Dr. J. Newton Friend, in nine volumes; Elementary Practical Chemistry, for Medical and other Students, J. E. Myers and J. B. Firth; The Storage of Petroleum Spirit, Major A. Cooper-Key; The Petroleum Technologist's Pocket Book, Sir Boverton Redwood and A. Eastlake, illustrated; Oil Chemists' Pocket-Book, Dr. H. Ingle and J. A. Sutcliffe; The Raw Materials of the Enamel Industry and their Chemical Technology, Dr. J. Grünwald, translated by Dr. H. H. Hodgson; in *Engineering*—An Introduction to Town Planning, J. Julian, illustrated; in *Geology*—A Text-Book of Geology, Prof. J. Park; in *Medical Science*—A Practical Handbook of the Tropical Diseases of Asia and Africa, Dr. H. C. Lambart, illustrated; in *Metallurgy*—The Metallurgy of the Non-Ferrous Metals, Prof. W. Gowland, illustrated; Practical Assaying, Prof. J. Park, illustrated; in *Technology*—Clay and Pottery Industries, being vol. i. of the Collected Papers from the County Pottery Laboratory, Staffordshire, by several authors, edited by Dr. J. W. Mellor, illustrated; in *Miscellaneous*—Roberts-Austen: Addresses and Scientific Papers, together with a Record of the Work of Sir William Chandler Roberts-Austen, K.C.B., F.R.S., compiled and edited by S. W. Smith, illustrated; Memorials of Henry Forbes Julian, compiled and edited by his wife, Hester Julian, illustrated.

OUR ASTRONOMICAL COLUMN.

The Forthcoming Total Solar Eclipse.—While the various official and private expeditions are making preparations for observing the total solar eclipse of August 21 next, steamship companies are offering enticing pleasure cruises which include a brief stay on the line of totality on the Norwegian coast. As the last total solar eclipse visible in England took place so far back as the year 1724, and as 1927, the time for the next one, is as yet some time off, the opportunity to view the eclipse of this year should not be lost. The Royal Mail Steam Packet Company's ocean yachting steamer, *Arcadian,* twin screw, and 8939 gross tonnage, is timed to leave Grimsby on August 15 and Leith August 16, and will take up a position near Alsten, north of Torghatten Island, well on the central line. The Norway Travel Bureau of the Great Northern Railway Company has also arranged a special cruise. Passengers leave Newcastle-on-Tyne by the ss. *Venus* on August 15, and join the special steamer *Mira* at Bergen on August 17, a position being taken up at Stokka on eclipse day. It is stated that if a party of seventy-five to eighty members of the Royal Astronomical Society and the British Astronomical Association would avail themselves of this facility no other passengers would be accepted, and the itinerary would be varied to meet the requirements of the party, and the stay at any place in the eclipse zone prolonged.

A Monthly Report on Mars.—Prof. W. H. Pickering has commenced the publication of a series of monthly reports on the appearance of the planet Mars. The first of these was printed in the January number of *Popular Astronomy* (vol. xxii., No. 1, 1914). The observations described are made at the Jamaica Astronomical Station of Harvard College Observatory, situated near Mandeville, at an altitude of 2100 ft., The instrument employed is an 11-in. Clark refractor, and the magnification generally used 660. Prof. Pickering states that the changes on Mars cannot be described as conspicuous except when the planet is viewed under very exceptional conditions, but in their general character they may be detected by careful study, even by those who are not fortunate enough to reside in those portions of the world where the seeing is habitually good. It is in order to emphasise this constant change, unlike changes seen on Jupiter, but resembling more those which occur on our earth, that Prof. Pickering proposed the issue of this monthly